



Pest Management

Introduction

Shenandoah National Park has an active Pest Management Program that utilizes integrated pest management (IPM) processes and techniques. Exotic species are most often the targets of pest control measures. Their habits and environmental interactions inevitably place them in the pestiferous category. Native species, however, may be a nuisance or hazardous in certain conditions. For the purposes of this fact sheet, only animal pests are discussed but it is recognized that plants may also be regarded as pestiferous.

Management Needs

Providing for the enjoyment and safety of Park visitors sometimes requires action on the part of Park managers. This can involve situations with pests both inside and outside of buildings.



Deer mice can harbor hantavirus (Photo by Grant W. Sharpe).

Current Procedures

Integrated Pest Management involves initial assessment to determine if an animal is a pest and determining if it meets a management action threshold. These thresholds have been established in the Park IPM plan (currently under revision). Once an animal has been determined to be a pest, the available tools (manual/mechanical, cultural, biological, chemical) are reviewed and the best management practice for the circumstances in which the pest is located is determined and implemented. Post-treatment effectiveness monitoring is initiated and monitoring results determine whether further treatment is needed. Evaluation of pest control results are made to determine if the objectives were achieved or if control strategies need to be modified.

Most of the time, the determination of whether an animal is a pest is dictated by its behavioral interactions with

people and facilities. High visitor use areas, such as lodges, campgrounds, visitor centers, etc., are managed with more intensity than backcountry areas.

Physical exclusion and reduction of harborage that attracts the pest are usually the first line of defense. Some mammals become beggar animals due to actions of uninformed visitors. In the case of bears, removal of potential foods which draw them is accomplished by the installation of bear proof trash cans and attentive garbage removal in and near buildings. Interpretive messages are used to educate and try to change visitor understanding and attitudes. When this fails, the animal is trapped or immobilized and moved to a more remote location. In the case of venomous animals, close proximity to high visitor use areas requires quick action. For example, rattlesnakes are live captured and relocated while hornet nests are removed or destroyed. This is also the case for animals such as rodents and bats that can harbor diseases that can be pose health risks to humans.

The most common pests inside buildings include rodents, insects, and non- poisonous snakes. The Park IPM Coordinator directly handles these situations in Park staffed buildings. The ARAMARK concessioner contracts their pest control to a private company that operates within the guidelines of the ARAMARK IPM agreement with Shenandoah. Exclusion and removal of potential pest harborage is the primary focus of pest management efforts within buildings but this is not always successful. Chemical control of pests is used after physical control options fail. The pesticides used, are strictly controlled. Approval from the Northeast Regional Office must be secured in advance of use and pesticide use records are kept and reported yearly.

What We Have Learned

The key to successful pest management is having a plan in place that is embraced by both Park and concession staff. Prevention is very important but measures must also be in place that set procedures for handling pest- related problems. By continued evaluation of pest control results, we are able to determine if objectives were achieved and modify our strategies if necessary.

References

National Park Service. 2002. Park- wide Integrated Pest Management Plan (under revision) Shenandoah National Park. Shenandoah National Park, National Park Service, Luray, Virginia.

National Park Service. 2003. Integrated Pest Management



Pest Management (continued...)

Plan For the Buildings and Facilities of ARAMARK Sports and Entertainment Services, Inc. Shenandoah National Park, National Park Service, Luray, Virginia.